Town of Amherst
Zoning Board of Appeals - Special Permit
DECISION

Applicant: Northeast Utilities Services Co., agent for WMECO
P.O. Box 270, Hartford, CT 06141-0270

Owner: 1) Fred Luddy, 36 Pelham Road, Amherst (Map 14A, Parcel 39)
2) Steve Kucinski, 89 North East Street, Amherst (Map 14A, Parcel 56)

Date Application filed with the Town Clerk: August 17, 2006

Nature of request: Petitioner seeks a Special Permit under Sections 3.13, 3.231 and 3.340.0 of the Zoning Bylaw to erect two (8' x 8') sheds in a Flood Prone Conservancy District to aid in a DNAPL (Dense Non-Aqueous Phase Liquid) recovery system process.

Location of property: Pelham Road, Map 15A, Parcels 39 and 56, FPC Zone.

Legal notice: Published in the Daily Hampshire Gazette on September 13 and September 20, 2006, and sent to abutters on September 13, 2006.

Board members: Ted Rising, Russ Frank and Jane Ashby

Submissions:
The applicants submitted the following documents:

- Application packet including:
  - Letter to Christine M. Brestrup, dated August 14, 2006, from William J. Hoynack, Northeast Utilities System, enclosing documents
  - Application Form (2 pages)
  - Attachment 1 – Nature of Request describing the proposed project
  - Attachment 2 – Location of the Amherst MGP (Manufactured Gas Plant) on Pelham Road
  - Attachment 3 – Site Plan with the Proposed DNAPL (Dense Non-Aqueous Phase Liquid) Recovery Systems
  - Attachment 4 – Order of Conditions (for manufactured gas plant remediation)
  - Attachment 5 – Schematic Diagram of the 8-Foot A-Roof Model Sheds with Insurance and Home Improvement Contractor Registration
- Memorandum dated September 28, 2006, from James Adamik of Northeast Utilities to the Zoning Board of Appeals, in response to questions from the Planning Department regarding the displacement of floodwaters by the sheds.

Town staff and other boards and commissions submitted the following documents:

- Memorandum from the Planning Department dated September 21, 2006, revised September 26, 2006, commenting on the application;
- Determination of Applicability from the Conservation Commission issued September 6, 2006.

Site Visit: September 26, 2006
At the site visit the Board was met by James Adamik of Northeast Utilities System. The Board observed:

- The site is located along the Fort River, at the bridge where the river runs under Pelham Road;
- The site lies to the east of the intersection of Main Street/Pelham Road and Northeast Street;
- There are two parcels affected by the application, one on the north side of Pelham Road and one on the south side;
- The affected area on the northern parcel is surrounded by a chain link fence with a gate which is normally kept locked; the affected area on the southern parcel is not fenced;
- The proposed location of the new shed on the northern parcel is close to the road, in the vicinity of a group of 55-gallon drums;
- The location of the new shed on the southern parcel is farther from the road, in the vicinity of an old farm road that parallels the river.

The Board also observed:

- The approximate location of the proposed trenches that will contain conduit that will be used to carry the DNAPL material from the areas of deposition to the 55-gallon drums which will be located in the sheds;
- One of the wellheads and a monitoring well on the north side of the road;
- One of the monitoring wells on the south side of the road;
- The silt fences that have been installed to protect the wetland;
- The concrete remnants of the old gas holders;
- An example of the green utility boxes that will be used to house the electrical equipment.

Public Hearing: September 28, 2006

Mr. Frank opened the public hearing and stated that the applicant was absent due to illness. Mr. Rising was also absent. Ms. Ashby MOVED to continue the public hearing to October 24, 2006. Mr. Frank SECONDED the motion. Ms. Ashby and Mr. Frank VOTED to continue the public hearing.

Continued Public Hearing: October 24, 2006

At the pubic hearing James Adamik, senior environmental specialist with Northeast Utilities, presented the petition. He made the following comments:

- The site is located along the Fort River, on Pelham Road;
- The site was owned by Amherst Gas Co. which produced "manufactured gas" on the site by burning coal to make gas;
- Coal tar was a byproduct of this manufacturing process; it was dumped on-site from 1916 to 1930;
- In 1930 manufactured gas was phased out in favor of electricity;
- In 2002 the Massachusetts Department of Environmental Protection contacted Northeast Utilities about contamination that had been discovered on the site;
- A study had been done near the sewer pump station, located adjacent to the site, and material was found that was not related to the fuel oil from the pump station; this prompted DEP to suspect that there was another source of contamination;
- Research found remnants of the manufactured gas plant on the site adjacent to the Fort River;
- Since 2002 Northeast Utilities Co. as agent for WMECO has been following procedures outlined by the Massachusetts Contingency Plan; Northeast Utilities has developed a Remediation Plan for the site;
- Northeast Utilities found several areas of DNAPL (Dense Non-Aqueous Phase Liquid) contamination pools at about 10 to 15 feet below ground level;
- Northeast Utilities designed a recovery system, the goal of which is to reduce the contaminants to a negligible amount; NU has installed recovery wells to remove the contamination;

- There is now a need to install structures on the site to house the equipment associated with the recovery, along with 55-gallon drums that will contain the contaminated material;
- Two sheds are being proposed, one at each of two locations, one south of Pelham Road and one north of Pelham Road; the proposed sheds will be 8 feet x 8 feet;
- They will be "care-free" sheds with A-frame roofs, painted grayish-green to blend in with the surroundings;
- They will be serviced daily at first and then weekly afterwards to ensure proper operation;
- The site is located in a Flood Prone Conservancy District and therefore a Special Permit is required;
- The Planning Department prepared a memorandum (dated September 21, 2006) commenting on the application and containing a question about the impact of the sheds on a 100-year flood;
- Northeast Utilities has submitted a memorandum to the Zoning Board, dated September 28, 2006, responding to questions about the impact on a 100-year flood;
- There will be no impact on a 100-year flood since the elevation of the sheds is above the 100-year flood plain as determined by the most recent FEMA maps;
- The sheds will be in place for at least 5 years; much of the contaminated material will be collected during the first few years; after that the collection amounts will slowly "tail off";
- After 5 years Northeast Utilities will re-evaluate the operation and determine what to do and how much longer to operate the recovery system.

Mr. Rising asked what would happen if a flood should occur, with flood water coming up above the level of the floor of the sheds. Mr. Adamik responded that the contaminated material in the ground will be pumped into a drum. The drums will be sealed. The drum will be located in a "house" (a shed) which will be built on piers. The piers will penetrate down to frost line and will thus provide a stable base for the sheds. The houses or sheds will be anchored to the piers so they are not likely to float during a flood event. Beyond the 100 year flood, in the case of a 100 to 500 year flood the flood waters will spread out into the surrounding fields since the land is relatively flat in that area. This spreading of flood waters will tend to minimize the depth of the potential flood.

The drums containing the contaminated material, located within the sheds, will sit on pallets. The pallets will have an 8" to 9" deep containment area that will catch any leaks from the drums. The spill-containment pallets will have a capacity of 66 gallons each. As long as the drums are not breeched then there will be no release of contaminants to the environment.

Mr. Rising stated that he had been concerned about the potential for a downstream obstruction which might cause water to back up onto the site. However he stated that he was satisfied with the answer provided by Mr. Adamik with respect to flooding.

Mr. Frank asked if there is DNAPL in the groundwater. Mr. Adamik stated that the DNAPL lies below the level of the water table and thus does lie within the groundwater. He described the soil layers in the area including a surface layer of sandy loam, underlain by a 10-foot thick layer of silty sand. The silty sand is underlain by about 65 feet of varved clays, made up of layers of silt and clay. The groundwater lies on top of the varved clays. The DNAPL site in pools within the groundwater which lies on top of the clay. The clay is fairly impermeable. A sample of the clay taken from the site showed that there was no DNAPL contamination in the clay.

Mr. Adamik stated that the slope of the clay layer controls the lateral movement of the DNAPL contaminant. The slope is shallow enough so that the DNAPL is not migrating. Mr. Adamik stated that the DNAPL is currently in equilibrium with the environment. He noted that it has been in place for more than 70 years. The

monitoring wells downstream from the site show no contamination. Unlike gas, DNAPL does not evaporate and is not biodegradable. It is harder to break down than gas. Therefore there are pools of DNAPL underground that are not being broken down by biological or other processes.

Mr. Frank asked about the constituents of the DNAPL. Mr. Adamik responded as follows:

- The constituents are PAH's (polynucleararomatic hydrocarbons);
- They are in a semi-viscous to viscous state and have an odor;
- The operation will be a removal process, not a treatment process;
- The DNAPL material will be piped into 55-gallon drums which will be removed when they are full;
- The drums have over-fill protection that will cause the pump to shut off once a drum is full;
- There will be room for 2 drums in each shed;
- It will take approximately one week for a drum to fill;
- There will never be more than two drums being filled at one time, one in each of the two sheds.
- There will be 4 recovery wells north of Pelham Road and 3 recovery wells south of Pelham Road;
- The conduit will be Teflon-coated nylon tubing, approximately ½" in diameter, running underground from the wells to the drums in the sheds;
- The nylon tubing will be encased in 4" PVC conduits to protect the tubing from damage due to digging or other disturbance;
- The tubing and conduits will be heat-traced to prevent freezing;
- The operation will run 365 days a year, around the clock;
- The houses or sheds will be insulated, heated with electrical heat and lit;
- The heaters will be of an explosion-proof type;
- DEP will oversee the operation.

Mr. Adamik went on to explain the DEP system. He made the following statements:

- In the DEP site remediation system there are four tiers of site contamination, Tier II and three levels of Tier I site contamination;
- The Tier II sites have impacts that are not as great as the Tier I sites;
- The Pelham Road DNAPL site is a Tier II site;
- The DEP recovery operation is run by an LSP (Licensed Site Professional);
- In this case the LSP will be Mr. Adamik, an employee of Northeast Utilities, who is a Licensed Site Professional certified by DEP to run operations such as DNAPL recovery;
- Northeast Utilities is trying to be pro-environmental;
- When the site gets to the end of the recovery operation it will be selected for an audit by DEP;
- Mr. Adamik will manage the construction of the recovery operation;
- Mr. Adamik needs to witness the operation in his role as LSP;
- He has An employee who works with him who will be doing daily monitoring of the operation once the recovery begins;
- After the initial start-up the monitoring will occur once a week.

Mr. Frank asked if Mr. Adamik had designed and operated other DNAPL recovery systems. Mr. Adamik stated that he has not designed and operated another DNAPL recovery system, however the principles are the same as for the recovery systems related to other chemicals that he has designed and operated. Mr. Adamik made an "educated guess" that the operation would be in place for 5 to 7 years. He was reluctant to rely on mathematical models to predict how long the operation would be in operation because such models only provide a "gross oversimplification". Mr. Adamik would like to see how the system works once it is up and running. Every 6 months he will prepare and send a Remedy Operation Status Report to DEP.

Ms. Ashby asked if the two temporary structures (sheds) would have exterior lighting. Mr. Adamik stated that there would be no exterior lighting since no one would be there after dark. The workers who monitor the site will work during normal workday hours. The buildings will be situated so that someone can drive up to them. If exterior lighting is needed there will be headlights from the workers' vehicles that can illuminate the exterior of the structures. There will be no windows in the structures, so light will not emanate from them.

Ms. Ashby asked about security. Mr. Adamik stated that the doors to the sheds will be locked. There was discussion about the kind of lock that will be used. Mr. Adamik pointed out that the northern site will be fenced and that the fence will have a locked gate. The locks to be used on the doors will be a hasp and padlock style of lock.

There was discussion about an alarm system and other security measures that might be put in place if vandalism were to occur.

Mr. Frank asked why the structures were proposed to be placed so close to the road. Christine Brestrup, Land Use Planner, noted that the structures were proposed to be placed within the front setback requirements for the FPC Zone. The front setback requirement is 40 feet. However the Board may modify the front setback requirement under a Special Permit. Mr. Adamik stated that the structures are proposed to be placed close to the road for access during winter. He noted that there may be problems with snow cover during the winter if the sheds are placed farther back on the site.

Ms. Ashby MOVED to close the evidentiary portion of the public hearing. Mr. Frank SECONDED the motion. The Board VOTED unanimously to close the evidentiary portion of the public hearing.

Public Meeting – Discussion
Mr. Frank noted that he was concerned about the operation but not opposed to the project. He was satisfied that precautions will be taken to secure against vandalism.

The Board discussed potential conditions that would be imposed and findings that would be made if the application were to be approved.

Public Meeting – Findings:
Under Zoning Bylaw Section 10.38 the Board found that:

10.380 – The proposal is suitably located in the neighborhood and is compatible with existing uses because due to the contamination existing on the site it is the only place suitable for the use and the use has been approved by the Board.

10.382 and 10.385 – The proposal would not constitute a nuisance and reasonably protects the adjoining premises against detrimental or offensive uses on the site because the use will actually reduce the nuisance by extracting the detrimental and offensive contaminated material from the site. The proposed structures will not be visually offensive since they are of a design and color approved by the Board.

10.383 – The proposal would not be a substantial inconvenience or hazard to abutters, vehicles or pedestrians because there will be minimal vehicular traffic and the buildings will be close enough to the road to be easily accessed by service vehicles.

10.384 – Adequate and appropriate facilities would be provided for the proper operation of the proposed use because the facilities have been described on the approved plan and in the public hearing and they appear to be adequate and appropriate to perform the proposed DNAPL recovery process.

10.388 – The proposal ensures adequate space for off-street loading and unloading of vehicles because there is adequate vehicular access and parking for the loading and unloading of the 55-gallon

drums used in the recovery process.

10.389 – The proposal provides adequate methods of disposal and /or storage for sewage, refuse, recyclables and other wastes because the nature of the proposed operation is such that contaminants will be removed in a timely manner by approved means.

10.390 and 10.394 – The proposal ensures protection from flood hazards because the sheds will be placed above the 100-year flood elevation, according to the memorandum, dated September 28, 2006, from James Adamik of Northeast Utilities.

10.393 – The proposal provides protection of adjacent properties by minimizing the intrusion of lighting because there will be no exterior lighting and if exterior lighting is proposed in the future the applicant will need to return to the Board at a public meeting to gain approval for the addition of lighting. Also, there will be no windows in the sheds so there will not be light spilling out from the inside of the building.

10.395 – The proposal does not create disharmony with respect to the scale and architecture of existing buildings because the buildings are of an approved design and color. In addition they are temporary structures and will be removed at the completion of the removal operation.

10.398 – The proposal is in harmony with the general purpose and intent of the Zoning Bylaw for the reasons enumerated above.

Public Meeting – Zoning Board Decision

Mr. Frank MOVED to approve the findings under Section 10.38 and the conditions drafted during the discussion. Ms. Ashby SECONDED the motion. The Board VOTED unanimously to approve the findings under Section 10.38 of the Zoning Bylaw and the conditions drafted during the discussion.

Mr. Frank MOVED to approve the application with the conditions. Ms. Ashby SECONDED the motion.

For all the reasons stated above the Board VOTED unanimously to grant a Special Permit with conditions, under Sections 3.13, 3.231 and 3.340.0 of the Zoning Bylaw to erect two (8' x 8') sheds in a Flood Prone Conservancy District to aid in a DNAPL (Dense Non-Aqueous Phase Liquid) recovery system process, as applied for by Northeast Utilities Services Co., agent for WMECO, at Pelham Road (Map 15A, Parcels 39 and 56).

_____ _____ _____

EDWARD RISING RUSSELL FRANK JANE ASHBY

FILED THIS _____day of _____, 2006 at _____,

in the office of the Amherst Town Clerk _____.

TWENTY-DAY APPEAL period expires, _____2006.

NOTICE OF DECISION mailed this _____day of _____, 2006
to the attached list of addresses by _____, for the Board.

NOTICE OF PERMIT or Variance filed this _____day of _____ , 2006,
in the Hampshire County Registry of Deeds.

Town of Amherst
Zoning Board of Appeals

SPECIAL PERMIT

The Amherst Zoning Board of Appeals hereby grants a Special Permit, under Sections 3.13, 3.231 and 3.340.0 of the Zoning Bylaw to erect two (8' x 8') sheds in a Flood Prone Conservancy District to aid in a DNAPL (Dense Non-Aqueous Phase Liquid) recovery system process, as applied for by Northeast Utilities Services Co., agent for WMECO, at Pelham Road (Map 15A, Parcels 39 and 56), with conditions as follows:

1. The project shall be built in accordance with the plan approved by the Board on October 24, 2006.

2. No more than two (2) filled drums per building shall be on site at any time.

3. All structures shall be removed and their sites restored at the completion of the extraction process, in accordance with the Order of Conditions #NOI 06-1025 issued by the Conservation Commission.

4. The structures and fence shall be kept secured with locks at all times that authorized personnel are not present.

5. Only authorized personnel shall have keys or other means of access inside the fencing and locked sheds.

6. There shall be no exterior lighting.

7. Any future proposal to add exterior lighting must be approved by the Board at a public meeting.

_____ _____
EDWARD RISING, Chair DATE
Amherst Zoning Board of Appeals